

WHAT IS CLAIMED IS:

1. A method for a computer to automatically test a website or a web application, comprising the steps of:

opening a page within the website or web application;

examining a code that generated the page;

5 detecting a user input field in the examined code and categorizing the detected input field according to a type of the input field;

consulting a knowledge base of standard inputs, the knowledge base of standard inputs storing a plurality of standard inputs that are categorized according to one of a plurality of input field types;

10 selecting a standard input from the knowledge base of standard inputs, the selected standard input being chosen from among the plurality of standard inputs of the selected input field type and applying the selected standard input to the detected input field;

checking a page generated by the website or the web application for a generated message as a result of applying the selected standard input to the detected input field;

15 when the website or web application generates a message in response to the applied standard input, consulting a knowledge base of standard errors, the knowledge base of standard errors storing a plurality of standard errors and matching the generated message to one of the plurality of stored standard errors or assigning a likelihood that the generated message is an error message when the generated message does not match one of the plurality
20 of stored standard errors in the knowledge base of standard errors, and

generating a log entry, the log entry including at least one of an identification and a path of the generated page, the applied standard input and the generated message and a flag

indicating that the generated error message is an error message or is believed to be a potential error message.

2. The method of claim 1, further including the steps of:

initiating a testing session by logging in the website or web application, and

5 returning to the examining step to complete successive iterations of the method until an end of the testing session is reached.

3. The method of claim 1, wherein the code includes at least one of HTML, XML, JavaScript and Java Applets.

10 4. The method of claim 2, wherein the end of the testing session is reached when a predetermined condition evaluates true.

5. The method of claim 4, wherein the predetermined condition includes at least one of:

a first selectable number of input fields have been tried;

15 a second selectable number of pages of the website or web application have been opened;

after the website or web application has been tested for a third selectable number of minutes;

after all pages of the website or web application under a main page of the predetermined URL have been tested, and

20 a user-defined condition has been satisfied or a user-definable event has occurred.

6. The method of claim 1, further comprising a step of at least one of adding a new standard input, updating an existing standard input and removing an existing standard to/from the knowledge base of standard inputs.

7. The method of claim 1, further comprising a step of at least one of adding a

new standard error, updating an existing standard error and removing an existing standard error to/from the knowledge base of standard errors.

8. The method of claim 1, wherein the knowledge base of standard inputs and the knowledge base of standard errors are stored in a same database.

5 9. The method of claim 2, wherein the returning step causes the opening step to return to and open a same page within the website or web application.

10. The method of claim 9, wherein the applying step applies a different standard input of the selected input field type from the knowledge base of standard inputs in each successive iteration of the method.

10 11. The method of claim 2, wherein the returning step causes the opening step to return to and open a different page within the website or web application.

12. A machine-readable medium having data stored thereon representing sequences of instructions which, when executed by computing device, causes said computing device to automatically test a website or a web application, by performing the steps of:

2

- 5 opening a page within the website or web application;
- examining a code that generated the opened page;
- detecting a user input field in the examined code and categorizing the detected input field according to a type of the input field;
- consulting a knowledge base of standard inputs, the knowledge base of standard
- 10 inputs storing a plurality of standard inputs that are categorized according to one of a plurality of input field types;
- selecting a standard input from the knowledge base of standard inputs, the selected standard input being chosen from among the plurality of standard inputs of the selected input field type and applying the selected standard input to the detected input field;
- 15 checking a page generated by the website or the web application for a generated message as a result of applying the selected standard input to the detected input field;
- when the website or web application generates a message in response to the applied standard input, consulting a knowledge base of standard errors, the knowledge base of standard errors storing a plurality of standard errors and matching the generated message to
- 20 one of the plurality of stored standard errors or assigning a likelihood that the generated message is an error message when the generated message does not match one of the plurality of stored standard errors in the knowledge base of standard errors, and
- generating a log entry, the log entry including at least one of an identification and a

path of the generated page, the applied standard input, the generated message and a flag indicating that the generated error message is an error message or is believed to be a potential error message.

13. The medium of claim 12, further including the steps of:

5 initiating a testing session by logging in the website or web application, and

returning to the examining step to complete successive iterations of the method until an end of the testing session is reached.

14. The medium of claim 12, wherein the code includes at least one of HTML, XML, JavaScript and Java Applets.

10 15. The medium of claim 13, wherein the end of the testing session is reached when a predetermined condition evaluates true.

16. The medium of claim 15, wherein the predetermined condition includes at least one of:

a first selectable number of input fields have been tried;

15 a second selectable number of pages of the website or web application have been opened;

after the website or web application has been tested for a third selectable number of minutes;

20 after all pages of the website or web application under a main page of the predetermined URL have been tested, and

a user-defined condition has been satisfied or a user-definable event has occurred.

17. The medium of claim 12, further comprising a step of at least one of adding a new standard input, updating an existing standard input and removing an existing standard to/from the knowledge base of standard inputs.

18. The medium of claim 12, further comprising a step of at least one of adding a new standard error, updating an existing standard error and removing an existing standard error to/from the knowledge base of standard errors.

19. The medium of claim 12, wherein the knowledge base of standard inputs and the knowledge base of standard errors are stored in a same database.

20. The medium of claim 13, wherein the returning step causes the opening step to return to and open a same page within the website or web application.

21. The medium of claim 20, wherein the applying step applies a different standard input of the selected input field type from the knowledge base of standard inputs in each successive iteration of the method.

22. The medium of claim 13, wherein the returning step causes the opening step to return to and open a different page within the website or web application.

23. A computer system suitable for automatically testing a website or a web application, comprising: 3

a database for storing a plurality of database objects;

at least one processor;

5 at least one data storage device;

a plurality of processes spawned by said at least one processor, the processes including processing logic for:

opening a page within the website or web application;

examining a code that generated the opened page;

10 detecting a user input field in the examined code and categorizing the detected input field according to a type of the input field;

consulting a knowledge base of standard inputs, the knowledge base of standard inputs storing a plurality of standard inputs that are categorized according to one of a plurality of input field types;

15 selecting a standard input from the knowledge base of standard inputs, the selected standard input being chosen from among the plurality of standard inputs of the selected input field type and applying the selected standard input to the detected input field;

checking a page generated by the website or the web application for a generated message as a result of applying the selected standard input to the detected input field;

20 when the website or web application generates a message in response to the applied standard input, consulting a knowledge base of standard errors, the knowledge base of standard errors storing a plurality of standard errors and matching the generated message to one of the plurality of stored standard errors or assigning a likelihood that the generated

message is an error message when the generated message does not match one of the plurality of stored standard errors in the knowledge base of standard errors, and

generating a log entry, the log entry including at least one of an identification and a path of the generated page, the applied standard input, the generated message and a flag indicating that the generated error message is an error message or is believed to be a potential error message.

24. The computer system of claim 23, further including the steps of:
initiating a testing session by logging in the website or web application, and
returning to the examining step to complete successive iterations of the method until an end of the testing session is reached.

25. The computer system of claim 23, wherein the code includes at least one of HTML, XML, JavaScript and Java Applets.

26. The medium of claim 24, wherein the end of the testing session is reached when a predetermined condition evaluates true.

27. The computer system of claim 26, wherein the predetermined condition includes at least one of:

a first selectable number of input fields have been tried;

a second selectable number of pages of the website or web application have been opened;

after the website or web application has been tested for a third selectable number of minutes;

after all pages of the website or web application under a main page of the predetermined URL have been tested, and

a user-defined condition has been satisfied or a user-definable event has occurred.

28. The computer system of claim 23, further comprising a step of at least one of adding a new standard input, updating an existing standard input and removing an existing standard to/from the knowledge base of standard inputs.

29. The computer system of claim 12, further comprising a step of at least one of adding a new standard error, updating an existing standard error and removing an existing standard error to/from the knowledge base of standard errors.

30. The computer system of claim 23, wherein the knowledge base of standard inputs and the knowledge base of standard errors are stored in a same database.

31. The computer system of claim 24, wherein the returning step causes the opening step to return to and open a same page within the website or web application.

32. The computer system of claim 31, wherein the applying step applies a different standard input of the selected input field type from the knowledge base of standard inputs in each successive iteration of the method.

33. The computer system of claim 24, wherein the returning step causes the opening step to return to and open a different page within the website or web application.

34. A method for a computer to automatically test a website or a web application, comprising the steps of:

opening a page within the website or web application;

detecting a user input field in the opened page;

5 selecting a standard input from a knowledge base of standard inputs that stores a plurality of standard inputs, and applying the selected standard input to the detected input field;

checking a page generated by the website or the web application for a generated message as a result of applying the selected standard input to the detected user input field;

10 attempting to match the generated message with one of a plurality of standard errors stored in a knowledge base of standard errors, and

when a matching message is generated as a result of applying the selected standard input to the detected user input field or when the generated message is determined to have a high likelihood of being an error message, generating a log entry, the log entry including at least one of an identification and a path of the generated page, the applied standard input, the generated message and a flag indicating that the generated error message is an error message or is believed to be a potential error message.

15

35. A machine-readable medium having data stored thereon representing sequences of instructions which, when executed by computing device, causes said computing device to automatically test a website or a web application, by performing the steps of:

- opening a page within the website or web application;
- detecting a user input field in the opened page;
- selecting a standard input from a knowledge base of standard inputs that stores a plurality of standard inputs, and applying the selected standard input to the detected input field;
- checking a page generated by the website or the web application for a generated message as a result of applying the selected standard input to the detected user input field;
- attempting to match the generated message with one of a plurality of standard errors stored in a knowledge base of standard errors, and
- when a matching message is generated as a result of applying the selected standard input to the detected user input field or when the generated message is determined to have a high likelihood of being an error message, generating a log entry, the log entry including at least one of an identification and a path of the generated page, the applied standard input, the generated message and a flag indicating that the generated error message is an error message or is believed to be a potential error message.

36. A computer system suitable for automatically testing a website or a web application, comprising:

a database for storing a plurality of database objects;

at least one processor;

5 at least one data storage device;

a plurality of processes spawned by said at least one processor, the processes including processing logic for:

opening a page within the website or web application;

detecting a user input field in the opened page;

10 selecting a standard input from a knowledge base of standard inputs that stores a plurality of standard inputs, and applying the selected standard input to the detected input field;

checking a page generated by the website or the web application for a generated message as a result of applying the selected standard input to the detected user input field;

15 attempting to match the generated message with one of a plurality of standard errors stored in a knowledge base of standard errors, and

when a matching message is generated as a result of applying the selected standard input to the detected user input field or when the generated message is determined to have a high likelihood of being an error message, generating a log entry, the log entry including at least one of an identification and a path of the generated page, the applied standard input, the generated message and a flag indicating that the generated error message is an error message or is believed to be a potential error message.

20